

PROTOCOL FOR THE COLLECTION AND SUBMISSION OF SPECIMENS FOR ISOLATION AND IDENTIFICATION OF INFLUENZA AND OTHER VIRUSES

DCLS will provide the collection materials and testing services in support of state and federal influenza monitoring and outbreak investigation programs. It also provides collection materials and testing for other viruses as listed in the table below.

Specimen Collection Kits:

Isolation kits are prepared by DCLS and may be obtained from the Sample Kit Office at (804) 648-4480 ext. 104.

Kit Contents:

- 1 - 8x10 biohazard bag with pouch & absorbent pad
- 1 - Secondary containment vessel (black and white)
- 1 - Instructions for the submission of specimens for influenza and other viruses
- 2 - Ice packs (additional supplies upon request)
- 1 - Insulated shipper per IATA
- 1 - Itemized list of contents card
- 1 - Clinical microbiology/virology request form
- 1 - Sterile (Dacron) polyester-tipped applicator swab
- 1 - Sterile viral transport media

INSTRUCTIONS FOR SPECIMEN COLLECTION

ISOLATION SPECIMEN SHOULD BE COLLECTED WITHIN 48 HOURS OF ONSET OF ILLNESS. Each isolation kit provides enough material to sample one patient. Collect specimen as close to clinical onset as possible and ship same day as collected using provided cooler and a refrigerated cold pack. *Specimens must be received within 72 hours of collection. Specimens collected on Fridays require advance notice before submission. Advance notification is needed to process specimens on a weekend.* Contact the DCLS Emergency Phone (804-335-4617) if weekend testing is needed.

Appropriate specimens for virus isolation are listed below:

Virus	Optimal Specimen for Collection
Influenza, Parainfluenza, Respiratory Syncytial Virus	Nasopharynx
Adenovirus	Nasopharynx, Rectal swab, Stool, Conjunctival swab
Herpes Simplex Virus and Varicella Zoster Virus	Mucocutaneous lesion, Conjunctival swab, Brain biopsy
Enterovirus	CSF, Throat, Rectal swab, Stool (feces), Heart tissue, Mucocutaneous lesion
Cytomegalovirus	Throat, Biopsy tissue, Urine
Mumps	Parotid gland/Buccal swab

Reference: Manual of Clinical Microbiology, 8th Edition, American Society for Microbiology.

Collection Procedures for Various Specimens:

Nasopharyngeal Swab:

1. Instruct the patient to sit with head slightly tilted backwards. Gently push the tip of the patient's nose back with your thumb.
2. Insert the nasopharyngeal swab into the nostril back to the nasopharynx. The patient's eyes will momentarily tear. Slowly rotate the swab as it is being withdrawn.
3. Repeat this process using the same swab in second nostril to collect from the nasopharynx.
4. Insert the swab into the transport broth bending the wire if necessary to fit completely inside the vial. The broth should cover the tip of the swab in the vial. Tightly cap the vial.
5. Label the VTM collection tube with the patient's name and date of collection. Complete the Clinical Microbiology/Virology Request Form (DGS form # -34-101[Rev.3/08]) and refrigerate the specimen until packaging for transport.
6. Pour as much of the saline collected from the patient as possible into the vial containing the transport broth, cap and seal tightly.

7. Label the VTM collection tube (NOT the metal container) with the patient's name and date of collection. Complete the clinical microbiology/virology request form (DGS form # -34-101[Rev.3/08]) and refrigerate the specimen until packaging for transport.

Mucocutaneous Lesion:

1. Carefully puncture the vesicle to expose the fluid within it with a sterile needle (not provided).
2. Gently blot up the released fluid with the sterile swab.
3. Swab vigorously (without producing bleeding) the exposed base of the lesion to remove infected epithelial cells.
4. Insert the swab into the transport broth bending the wire if necessary to fit completely inside the vial. Tightly cap the VTM collection tube.
5. Label the tube with the patient's name and date of collection. Complete the clinical microbiology/virology request form (DGS form# -34-101[Rev.3/08]) and refrigerate the specimen until packaging for transport.

Cerebrospinal Fluid (CSF):

1. Collect approximately 3 to 5 ml of spinal fluid and place in a sterile tube (not provided). Tightly cap to prevent leaking during transit.
2. Label the tube with the patient's name and date of collection. Complete the clinical microbiology/virology request form (DGS form # -34-101[Rev.3/08]) and refrigerate the specimen until packaging for transport.

Stool or Rectal Swab:

1. Place the feces (about the size of a dime) into a sterile urine cup (not provided). If collecting with swab, insert the (supplied) swab 4 to 6 cm. into the patient's rectum. Gently rub the swab against the mucosa to retrieve cellular and fecal material. Place swab into collection tube, cap and seal tightly.
2. Label the cup or tube with the patient's name and date of collection. Complete the clinical microbiology/virology request form (DGS form # -34-101[Rev.3/08]) and refrigerate the specimen until packaging for transport.

Parotid Gland/Buccal Swab:

1. Massage the parotid gland area (the space between the cheek and teeth just below the ear) for approximately 30 seconds prior to collection of the buccal secretions.
2. Gently swab the buccal cavity near the upper rear molars between the cheek and the gum.
3. Place swab in VTM collection tube, cap tightly and label the VTM collection tube with the patient's name and date of collection.
4. Complete the Clinical Microbiology/Virology Request Form (DGS form # -34-101[Rev.3/08]) and refrigerate specimen until packaging for transport.
5. Note that the CDC highly recommends collection of both a mumps viral specimen (buccal swab) and serum sample on each person with suspected mumps infection *as close to symptom onset as possible*.

INSTRUCTIONS FOR SPECIMEN TRANSPORT
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Package specimen for transport to the laboratory in compliance with shipping regulations detailed in IATA 1.5 AND 49 CFR Section 1720700 [U.S. Department of Transportation] using the provided shipper.

1. **Ensure that the specimen is properly labeled and that the Clinical Microbiology/Virology Request Form is complete, front and back.**
2. Open the black and white sealed pressurized cylinder vessel, leaving the absorbent material in place.
3. Insert the labeled, bagged sample into any crevices created by the absorbent material within the pressurized vessel and replace the black cap.
4. Place the pressurized vessel into the cardboard insert in the following manner:
 - o Flatten the cardboard insert.
 - o Place the pressurized vessel in the hole of the cardboard insert by inserting the black capped end first.
 - o While the cardboard insert and vessel are still in your hands, separate the cardboard insert such that it creates an X around the pressurized vessel. (see photo on below on LEFT)
5. Insert the cardboard shipper into the Styrofoam box, with the pressurized vessel at the bottom center of the insulated shipper. Place frozen cold packs into 2 of the 4 triangular compartments of the cardboard insert. Additional cold packs may be used if available to better control the temperature. (see photo below on RIGHT)



6. Insert the completed Green Clinical Microbiology/Virology Request form into the plastic Ziploc bag and place into the insulated shipper.
7. Place the Styrofoam lid on the Styrofoam shipper box.
8. **Please complete the list of contents card described in the kit contents section above and place this card between the secondary receptacle and outer packaging in accordance with IATA Packing instructions 650.**
9. Securely seal shipper, following the closing instructions found on the shipper.
10. Place the "UN3373 Biological Substance Category B" label on a side of the box not occupied by the directional labels.
11. **Ship specimen without delay. Specimen must be received at DCLS within 72 hours of collection.**

Result Reporting:

Routine monitoring results are mailed to submitter and the Office of Epidemiology. When alerted of a medical emergency or an outbreak, results will be telephoned to the submitter and to the Office of Epidemiology only if a reporting telephone number was provided.

Specimen Rejection:

Specimens may be rejected for the following reasons:

1. Samples received in the laboratory more than 72 hours post collection
2. Sample temperature requirements not maintained during shipment
3. Improperly or unlabelled samples
4. Insufficient volume
5. Sample collected in expired VTM
6. Samples collected in kits other than those supplied by DCLS
7. Excessive bacterial contamination

*Please forward
information or
questions about
specimen
collection or
transport to the
laboratory at
(804)-648-4480
x271 or x272.*